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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/522,337

07/15/2005

Shun Kayama

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

NGUYEN, TRAN N

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/522,337

Applicant(s)

KAYAMA ET AL.

Examiner

Tran N. Nguyen

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2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) -  
Paper No(s)/Mail Date 0105.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Claim Rejections - 35 USC § 112*

2. **Claims 1-5** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**In claims 1 and 5**, the term "thin" is a relative term, which renders the claim indefinite. The term "thin" is not defined by the claim. Even though the specification does provide a range of "thin" dimension for ascertaining the requisite degree. However, the term "thin" in the claimed language is a relative term.

By the same token, **in claim 3**, the phrase "thin magnetic plate has such an amount of area that the force of attraction" contains the term "thin" and the phrase "such an amount of area" that are relative terms.

The phrase "thin magnetic plate" is understood as "*a magnetic plate having a predetermined thickness*" and the phrase "thin magnetic plate has such an amount of area" is understood as "*said predetermined thickness of the magnetic plate is configured with a predetermined area so that the force of attraction*".

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 2 and 5, as understood**, are rejected under 35 U.S.C. 102(b) as being fully anticipated by **Kim (US Pub. No. 2004/0256930 A1)**.

Kim discloses a vibration generator (fig 1) comprising:

a bottom plate (16) having a flat coil substrate (c1-c3) installed thereto;

a stationary shaft (14) provided perpendicularly to the bottom plate;

a magnet (8) installed on the stationary shaft with a freely rotatable bearing (12) being disposed between them and opposite to the surface of the flat coil substrate with a slight clearance defined between them;

an unbalancer (24) installed to the magnet; and

a magnetic plate (6); and,

wherein, for generating a vibration, inherently a current being supplied to a coil on the flat coil substrate to rotate the magnet and unbalancer, the bottom plate (16) being formed from a nonmagnetic material, particular an insulating material; and

the magnetic plate (6) is installed at the side opposite to the magnet with the bottom plate (16) being placed between the magnetic plate (6) and the magnet (8), and

wherein the magnetic plate utilizes the magnetism of the magnet to attract the magnet toward the flat coil substrate because inherently the magnetic plate (6) functions as a magnetic back-yoke for enclosing a magnetic circuit for magnetic flux generated between the rotor and the stator of the vibrator. In other words, the magnetic plate (6) functions as a magnetic back-yoke for enclosing a magnetic circuit for magnetic flux generated between the rotor and the stator of the vibrator; thus, inherently the magnetic plates utilizes the magnetism of the magnet to attract the magnet toward the flat coil substrate.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 3-4** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim**, as applied in the base claim, and in view of ordinary skills of a worker in the art.

**Kim** discloses the claimed invention, except for the added limitations of claims 3-4.

*Regarding claim 3* reciting the magnetic plate has a predetermined area or thickness so that the force of attraction developed between the thin magnetic plate and magnet will not cause a variation in clearance between the magnet and surface of the flat coil substrate even if the magnet and unbalancer are rotated.

Those skilled in the art would understand that Kim's essential teaching is to construct the stator with a magnetic plate is installed at the side opposite to the magnet with the bottom plate (16) being placed between the magnetic plate (6) and the magnet (8), and there is a small air gap therebetween the rotor and the stator. The magnetic plate functions as a magnetic back-yoke for enclosing a magnetic circuit for magnetic flux generated between the rotor and the stator of the vibrator; thus, inherently the magnetic plates utilizes the magnetism of the magnet to attract the magnet toward the flat coil substrate. Therefore, it would have been obvious to an artisan to determine the magnetic plate's area of thickness (or thinness) so that the magnetic plate properly function as a magnetic back-yoke for enclosing a magnetic circuit for magnetic flux generated between the rotor and the stator, but would not have the overacting magnetic force to pull the rotor's magnet toward the coil for preventing retarding the rotor rotation.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the vibrating machine by configuring the magnetic plate with a

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predetermined area dimension in order to prevent the magnetic force acting on the magnetic plate pulling the rotor's magnet resulting in retarding the rotor's rotation. Also, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

**Regarding claim 4** reciting the thin magnetic plate is removably installed to the bottom plate, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the vibrating machine by configuring the magnetic plate to be removably because the magnetic plate is part of the vibrator housing; therefore, configuring the magnetic plate as a removably part would enable access to the vibrator's parts that housed therein for part repairing/replacing if needed. This would require only necessary mechanical skills in the art.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tran N. Nguyen

Primary Examiner

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